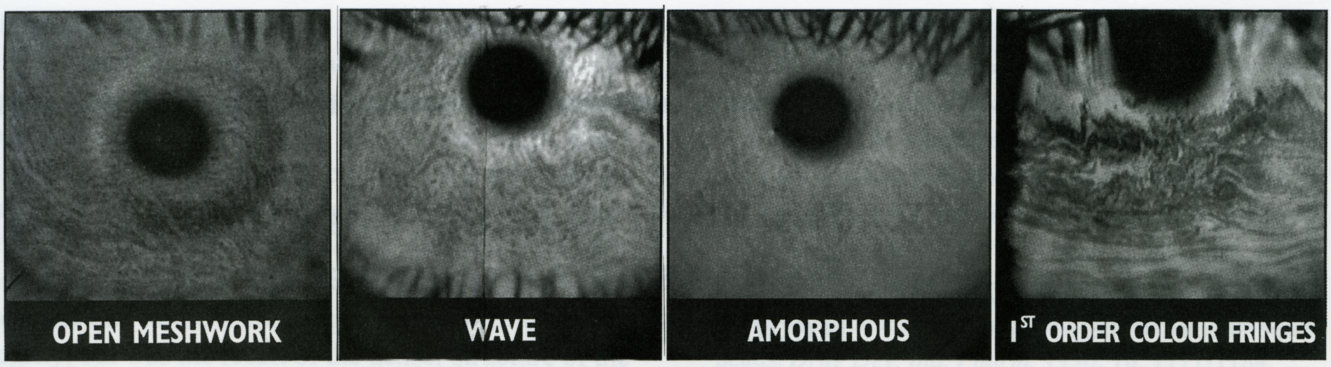

Fig. 1.

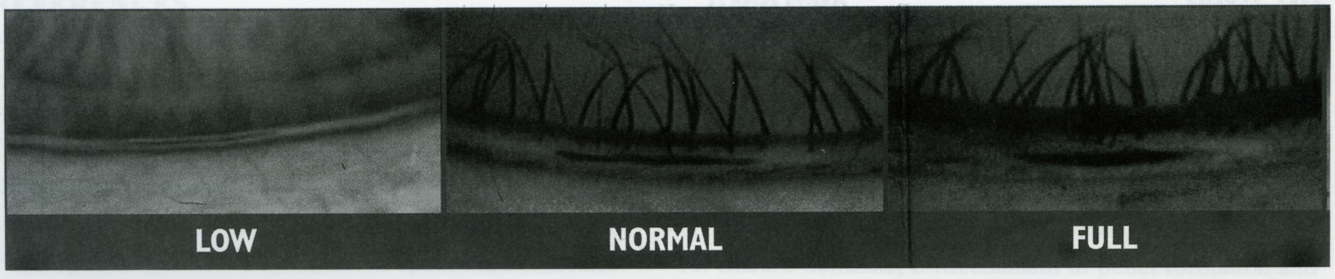

Fig. 2.

study were to compare corneal surface regularity between MGD patients and normal subjects and to explore the correlation with tear film stability.

MATERIALS AND METHODS

Twenty normal subjects and 20 MGD patients took part in this investigation. The normal subjects had neither abnormal external eye findings, ocular complaints, the habit of wearing contact lens, nor ocular surgical history. MGD was defined as the following: (1) patients felt burning, foreign body sensation,or dryness, and (2) the meibomian gland might be hypersecreting or obstructed. Under the microscope, the abnormal eyelids showed meibomian gland blockage with secretion coating, , and erythematous, irregular, thickened or telangiectasic changes. There were greasy scales, oily scurf, or collarettes around the eyelashes.[3]

The wide diffuse light source produced by the Tearscope and viewing with a microscope was used to describe the visible tear film structure. Lipid layer patterns were graded as open meshwork, wave, amorphous, and color fringe groups[4] (Fig. 1). NIBUT is the time measured in seconds between full eye opening after a blink and the appearance of the first visible tear film break. Three readings were taken for each measurement to determine the mean NIBUT in each case.

Corneal topography was performed with TMS instrument (Tomey Technology, Cambrige, MA). The SRI and SAI calculated by this instrument's computer were recorded. The topographic map patterns were classified into 6 different groups according to Bogan et al.[5] and Alvi et al.[6] methods (Fig. 2): round, oval, symmetric bowei, asymmetric bowei, kidney, and irregular types. Because the basic Schirmer test is more invasive than the other exams, it was measured last.